

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Xiao-An Zhang, et al.

Confirmation No.:

Application No.:

Examiner:

Filing Date: (Filed Herein)

Group Art Unit:

Title: Bistable Molecular Mechanical Devices with a Middle Rotating Segment Activated by an Electric Field for Electronic Switching, Gating, and Memory Applications

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

This Information Disclosure Statement is submitted:

- ☒ under 37 CFR 1.97(b), or
(Within three months of filing national application; or date of entry of national application; or before mailing date of first office action on the merits; whichever occurs last)
- ☐ under 37 CFR 1.97(c) together with either a:
☐ Statement under 37 CFR 1.97(e), or
☐ a \$180.00 fee under 37 CFR 1.17(p), or
(After the CFR 1.97 (b) time period, but before final action or notice of allowance, whichever occurs first)
- ☐ under 37 CFR 1.97 (d) together with a:
☐ Statement under 37 CFR 1.97(e)(1) or (2), and
☐ a \$180.00 fee set forth in 37 CFR 1.17(p).
(Filed after final action, a notice of allowance, on or before payment of the issue fee)

Please charge to Deposit Account **08-2025** the sum of \$0.00. At any time during the pendency of this application, please charge any fees required or credit any overpayment to Deposit Account **08-2025** pursuant to 37 CFR 1.25.

☒ Applicant(s) submit herewith Form PTO 1449 - Information Disclosure Citation together with copies, of patents, publications or other information of which applicant(s) are aware, which applicant(s) believe(s) may be material to the examination of this application and for which there may be a duty to disclose in accordance with 37 CFR 1.56.

☐ A concise explanation of the relevance of foreign language patents, foreign language publications and other foreign language information listed on PTO Form 1449, as presently understood by the individual(s) designated in 37 CFR 1.56 (c) most knowledgeable about the content is given on the attached sheet, or where a foreign language patent is cited in a search report or other action by a foreign patent office in a counterpart foreign application, an English language version of the search report or action which indicates the degree of relevance found by the foreign office is listed on form PTO 1449 and is enclosed herewith.

It is requested that the information disclosed herein be made of record in this application.

"Express Mail" label no. **EV 239377125**

Date of Deposit Sept. 10, 2003

I hereby certify that this is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to: Commissioner for Patents, Alexandria, VA 22313-1450.

By

Myra B. Christeck

Typed Name: Myra B. Christeck

Respectfully submitted,

Xiao-An Zhang, et al.

By

David W. Collins

DAvid W. Collins

Attorney/Agent for Applicant(s)
Reg. No. **26,857**

Date: **Sept. 10, 2003**

FORM PTO-1449 LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)	ATTY. DOCKET NO.	SERIAL NO.
	10003869-3	(Filed Herewith)
	APPLICANT	
	Xiao-An Zhang et al	
	FILING DATE	GROUP
	(Filed Herewith)	

REFERENCE DESIGNATION

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS
	1A	6,128,214	10/3/2000	Kuekes et al	365	151
	1B	6031756	2/29/2000	Gimzewski et al.	365	151
	1C					
	1D					
	1E					
	1F					
	1G					
	1H					
	1I					
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FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	TRANSLATION	
							YES	NO
	1L							
	1M							
	1N							
	1O							
	1P							

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

	1Q	U.S. Patent Application, Serial No.: 09/280,048 entitled "Chemically Synthesized and Assembled Electronic Devices", filed on March 29, 1999
	1R	U.S. Patent Application, Serial No.: 09/280,225 entitled "Molecular Wire Crossbar Interconnects for Signal Routing and Communications", filed on March 29, 1999
	1S	U.S. Patent Application, Serial No.: 09/280,045 entitled "Molecular Wire Crossbar Logic", filed on March 29, 1999

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	2L							
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	2N							
	2O							
	2P							

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

2Q	U.S. Patent Application, Serial No.: 09/280,049 entitled "Demultiplexer for a Molecular Wire Crossbar Network", filed on March 29, 1999
2R	U.S. Patent Application, Serial No.: 09/280,188 entitled "Molecular Wire Transistors" filed on March 29, 1999
2S	C.P. Collier et al, "Electronically Configurable Molecular-Based Logic Gates", Science, Vol. 285, pp. 391-394 (16 July 1999)

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OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

3Q	C.P. Collier et al, "A [2]Catenane-Based Solid State Electronically Reconfigurable Switch", Science, Vol. 289, pp. 1172-1175 (18 August 1000)
3R	A.M. Morales et al, "A laser ablation method for the synthesis of crystalline semiconductor nanowires", Science, Vol. 279, pp. 208-211 (Jan. 9, 1998)
3S	J.R. Heath et al, "A liquid solution synthesis of single crystal germanium quantum wires", Chemical Physics Letters, Vol. 208, pp. 263-268 (June 11, 1993)

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PATENT APPLICATION

Sheet 4 of 5

FORM PTO-1449 LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)	ATTY. DOCKET NO. 10003869-3	SERIAL NO. (Filed Herewith)
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OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

4Q	V.P. Menon et al, "Fabrication and Evaluation of Nano-electrode Ensembles", Analytical Chemistry, Vol. 67, pp. 1920-1928 (July 1, 1995)
4R	T. Vossmeier et al, "Combinatorial approaches toward patterning nanocrystals", Journal of Applied Physics, Vol. 84, pp. 3664-3670 (Oct. 1, 1998)
4S	D.V. Leff et al, "Thermodynamic Control of Gold Nanocrystal Size: Experiment and Theory", The Journal of Physical Chemistry, Vol. 99, pp. 7036-7041 (May 4, 1995)

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	5N							
	5O							
	5P							

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

	5Q	J.D.L. Holloway et al, "Electron-transfer reactions of metallocenes: Influence of metal oxidation state on structure and reactivity", Journal of the American Chemical Society, Vol. 101, pp. 2038-2044 (April 11, 1979)
	5R	
	5S	

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